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Docket No: 740819-1052
Application No. 10//829,476REMARKS

The Office Action dated April 6, 2007 has been received and its contents carefully noted. In view of the following comments, it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner. As previously, claims 1-7 are presently pending in the instant application.

With reference now to the Office Action, and particularly page 2 thereof, the Examiner is of the position that the reissue oath/declaration which accompanied the present application is defective because it fails to identify at least one error which is relied upon to support the reissue application. Particularly, the Examiner states that the reason why the deletions of claim 1 correct an error or errors is unclear. Furthermore, the Examiner rejects claims 1-7 as being based upon a defective reissue oath under 35 U.S.C. §251. This rejection is respectfully traversed and it is respectfully submitted that applicants reissue oath/declaration properly sets forth at least one error which is relied upon to support the reissue application.

That is, on page 1 of the reissue application declaration, applicant notes that they verily believe the original patent to be wholly or partially inoperative or invalid by reason of the patentee claiming more or less than he had the right to claim in the patent. As noted by the Examiner on page 2 of the declaration the error upon which the reissue is based is set forth as being the inclusion in claim 1 of the phrase "wherein an edge portion of the compositor upper electrode is formed onto the protective insulating film" which has been deleted from the claim. Further, the term "direct" has been deleted from the claim as well. Clearly, the error relied upon by the applicant is that the inclusion of each of these limitations and independent claim 1 rendered such claim narrower than that to which Applicant is believed to be entitled. Accordingly, it is respectfully submitted that applicants' declaration properly sets forth at least one error which is relied upon in supporting the originally filed reissue application. Therefore, it is respectfully requested that the rejection of claims 1-7 be reconsidered and withdrawn by the Examiner.

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Further on page 2 of the Office Action, claim 1 has been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,644,151 issued to Izumi *et al.*, in view of U.S. Patent No. 6,121,648 issued to Evans. This rejection is with respectfully traversed in that the combination proposed by the Examiner neither discloses nor suggests that which is presently set forth by applicants claimed invention.

That is, independent claim 1 recites a semiconductor device comprising a protective insulating film deposited on a semiconductor substrate having a first and second field-effect transistor formed thereon, a capacitor composed of a capacitor lower electrode, a capacitor insulating film made of an insulating metal oxide, and a capacitor upper electrode which are formed in upwardly stacked relationship on the protective insulating film, a first contact plug formed in the protective insulating film to provide a connection between an impurity diffusion layer serving as a source or drain region of the first field-effect transistor and the capacitor lower electrode, a second contact plug formed in the protective insulating film to provide a connection between an impurity diffusion layer serving as a source or drain region on the second field-effect transistor and the capacitor upper electrode, and a hydrogen barrier film entirely covering the capacitor upper electrode. More specifically, and with reference to Figure 1, the present invention relates to a semiconductor device comprising a capacitor having a capacitor insulating film 110A composed of an insulating metal oxide film such as a ferroelectric film or a high dielectric constant film. The semiconductor device further comprises a first contact plug 107 formed in a protective insulating film 106 to provide a direct connection between an impurity diffusion layer 105 serving as a source or drain region of the first field-effect transistor and the capacitor lower electrode 109 as well as a second contact plug 108 formed in the protective insulating film 106 to provide a connection between an impurity diffusion layer serving as a source or drain region of the second field-effect transistor and a capacitor upper electrode 111. In this regard, and in accordance with the present invention, when a contact hole for providing a connection between an impurity diffusion layer of a second field-effect transistor

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and a wiring layer formed on the protective insulating film 113 on the capacitor is formed, a hydrogen atom generated by a resist pattern used for forming the contact hole is removed by using an oxygen plasma, reaches the capacitor insulating film 110A. This is achieved by having a structure in which the capacitor upper electrode is covered with a protective insulating film formed on the capacitor. Clearly, the combination proposed by the Examiner neither discloses nor remotely suggests these particular features.

That is, in reviewing the teachings of Izumi *et al.* it is noted that this reference relates to a general DRAM and no where disclose or suggest a semiconductor device having a ferroelectric capacitor. Contrary to the Examiners assertion on page 2 of the office action, the patent to Izumi *et al.*, fails to disclose or remotely suggest first and second contact plugs as specifically recited by applicants claimed invention. Further, the patent to Izumi *et al.* as noted by the Examiner fails to disclose or remotely suggest a hydrogen barrier film entirely covering the capacitor upper electrode. In view of this shortcoming, the Examiner relies on the teachings of Evans, in particular Figure 10, where the Examiner states that Evans discloses a hydrogen barrier entirely covering the platinum upper electrode of a capacitor.

In reviewing the teachings of Evans, it is noted that this reference is directed to a semi-conductor device having a ferroelectric capacitor and further discloses the use of a first contact plug for providing a direct connection between an impurity diffusion layer of a field-effect transistor and a capacitor lower electrode. However, it is respectfully submitted that Evans clearly fails to disclose or remotely suggest a second contact plug for providing a connection between an impurity diffusion layer of a second field-effect transistor and a capacitor upper electrode as specifically recited by applicants' claimed invention. Accordingly, it is respectfully submitted that the combination proposed by the Examiner and particularly the teachings of izumi *et al.* in view of that of Evans fails to disclose or suggest that which is presently set forth by Applicants' claimed invention. Therefore, it is respectfully submitted that Applicants' claimed invention as set forth in independent claim 1, clearly distinguishes over

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the combination proposed by the Examiner and is in proper condition for allowance.

Turning now to pages 3 and 4 of the office action, claims 2-7 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Izumi *et al.* in view of Evans as applied to independent claim 1 and further in view of several secondary references, namely Koyama, Sandhu *et al.*, Graettinger *et al.*, and Jones. Each of these rejections are likewise respectfully traversed, in that the additional references relied on by the Examiner fail to overcome the aforementioned shortcomings associated with the combination of Izumi *et al.* in view of Evans. Consequently, it is respectfully submitted that even if the references were combined in the manner suggested by the Examiner, such combinations fail to achieve that which is presently set forth by applicants' claimed invention. Accordingly, it is respectfully submitted that dependent claims 2-7 are likewise in proper condition for allowance.

Therefore, in view of the foregoing it is respectfully requested that the rejections of record be reconsidered and withdrawn by the Examiner, and that claims 1-7 be allowed and that the application be passed to issue.

Should the Examiner believe a conference would be a benefit in expediting the prosecution of the instant application he is hereby invited to telephone counsel to arrange such a conference.

Respectfully submitted,



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